

**APPENDIX O**  
**CLASSICAL RELIABILITIES**

**Table O-1. Subgroup Reliabilities—High School Biology**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	36,383	60	37.39	12.22	0.91	3.59
Economically Disadvantaged	12,633	60	30.62	11.97	0.91	3.65
African American	3,138	60	31.77	11.68	0.90	3.64
Asian	2,430	60	44.88	10.86	0.91	3.27
Hispanic	7,358	60	29.47	11.99	0.91	3.65
Multi-race	1,246	60	38.07	12.65	0.92	3.60
Native American	67	60	36.57	12.46	0.91	3.68
Pacific Islander/Hawaiian	29	60	37.07	14.27	0.93	3.74
White	22,115	60	39.96	10.85	0.90	3.48
Female	18,152	60	38.15	11.88	0.91	3.57
Male	18,183	60	36.61	12.52	0.92	3.59
LEP	1,839	60	19.45	8.93	0.86	3.37
FLEP	1,804	60	32.58	11.26	0.90	3.64
LEPFLEP	3,643	60	25.95	12.09	0.91	3.61
Plan 504	2,697	60	37.05	11.39	0.90	3.57
Special Education	5,904	60	26.83	11.20	0.90	3.58
Title I	11,885	60	32.19	11.99	0.91	3.64

**Table O-2. Subgroup Reliabilities—High School Chemistry**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	16	60	29.69	10.76	0.89	3.53
Economically Disadvantaged	7	--	--	--	--	--
African American	2	--	--	--	--	--
Asian	3	--	--	--	--	--
Hispanic	2	--	--	--	--	--
Multi-race	0	--	--	--	--	--
Native American	0	--	--	--	--	--
Pacific Islander/Hawaiian	0	--	--	--	--	--
White	9	--	--	--	--	--
Female	9	--	--	--	--	--
Male	7	--	--	--	--	--
LEP	1	--	--	--	--	--
FLEP	1	--	--	--	--	--
LEPFLEP	2	--	--	--	--	--
Plan 504	1	--	--	--	--	--
Special Education	2	--	--	--	--	--
Title I	2	--	--	--	--	--

**Table O-3. Subgroup Reliabilities—High School Introductory Physics**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	11,563	60	36.40	12.71	0.92	3.59
Economically Disadvantaged	3,397	60	27.94	11.65	0.90	3.64
African American	1,103	60	26.21	11.05	0.89	3.61
Asian	920	60	44.10	11.23	0.91	3.29
Hispanic	1,990	60	28.44	11.92	0.91	3.65
Multi-race	479	60	38.67	13.37	0.93	3.53
Native American	17	60	32.76	12.44	0.92	3.54
Pacific Islander/Hawaiian	3	--	--	--	--	--
White	7,051	60	39.09	11.28	0.90	3.49
Female	5,608	60	35.90	12.44	0.92	3.59
Male	5,936	60	36.85	12.95	0.92	3.57
LEP	536	60	19.48	9.54	0.87	3.44
FLEP	677	60	31.19	11.60	0.90	3.62
LEPFLEP	1,213	60	26.01	12.21	0.91	3.63
Plan 504	813	60	36.27	11.26	0.90	3.60
Special Education	2,088	60	25.81	11.16	0.90	3.60
Title I	2,412	60	26.06	11.01	0.89	3.61

**Table O-4. Subgroup Reliabilities—High School Technology/Engineering**

Subgroup	Number of Students	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
All Students	372	60	30.13	10.10	0.88	3.49
Economically Disadvantaged	175	60	27.49	9.77	0.87	3.52
African American	25	60	22.40	11.55	0.90	3.60
Asian	6					
Hispanic	71	60	27.14	8.72	0.84	3.44
Multi-race	10	60	30.50	9.01	0.85	3.50
Native American	0					
Pacific Islander/Hawaiian	0					
White	260	60	31.64	9.83	0.87	3.48
Female	127	60	27.96	8.59	0.83	3.49
Male	245	60	31.25	10.64	0.89	3.49
LEP	23	60	21.09	8.48	0.84	3.42
FLEP	22	60	25.09	10.38	0.88	3.57
LEPFLEP	45	60	23.04	9.57	0.87	3.51
Plan 504	42	60	31.83	10.39	0.89	3.41
Special Education	123	60	25.10	9.66	0.87	3.42
Title I	207	60	29.14	9.64	0.87	3.49

**Table O-5. Reliabilities by Reporting Category—High School Biology**

Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
AP	7	10	5.46	2.24	0.61	1.40
BC	12	15	9.53	3.34	0.69	1.85
EC	10	13	9.09	2.96	0.69	1.65
EV	8	11	6.91	2.35	0.57	1.54
GE	8	11	6.40	3.07	0.74	1.58

\* Reporting category definitions are given on the next page.

**Table O-6. Reliabilities by Reporting Category—High School Chemistry**

Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
AS	12	15	8.56	3.79	0.83	1.55
BR	12	18	9.69	4.39	0.74	2.26
SO	9	12	4.06	1.95	0.42	1.48
TH	12	15	7.38	2.70	0.69	1.51

\* Reporting category definitions are given on the next page.

**Table O-7. Reliabilities by Reporting Category—High School Introductory Physics**

Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
EM	9	12	7.25	2.99	0.70	1.64
HT	6	9	5.49	2.35	0.64	1.41
MF	18	24	14.49	5.22	0.81	2.28
WV	12	15	9.16	3.46	0.75	1.74

\* Reporting category definitions are given on the next page.

**Table O-8. Reliabilities by Reporting Category—High School Technology/Engineering**

Item Reporting Category*	Number of Items	Raw Score			Alpha	SEM
		Maximum	Mean	Standard Deviation		
CM	9	12	7.02	2.76	0.68	1.56
ED	9	12	7.01	2.23	0.52	1.54
EL	12	18	7.37	3.22	0.63	1.96
FL	15	18	8.73	3.64	0.73	1.88

\* Reporting category definitions are given on the next page.

## Reporting Category Definitions

AP	=	Anatomy and Physiology
AS	=	Atomic Structure and Periodicity
BC	=	Biochemistry and Cell Biology
BR	=	Bonding and Reactions
CM	=	Construction and Manufacturing
EC	=	Ecology
ED	=	Engineering Design
EL	=	Electrical and Communications Systems
EM	=	Electromagnetism
EV	=	Evolution and Biodiversity
FL	=	Fluid and Thermal Systems
GE	=	Genetics
HT	=	Heat and Heat Transfer
MF	=	Motion and Forces
SO	=	Solutions, Equilibrium, and Acid-Base Theory
TH	=	Properties of Matter and Thermochemistry
WV	=	Waves and Radiation